



01A0	400417	1 W	Slave Address	---	1	1	---	---	---	---	247	1	2		R/W
01A1	400418	1 W	Com (RS-485) Baud Rate	---	3	1	---	---	---	---	7	3	6409		R/W
01A2	400419	1 W	Com (RS-485) Configuration	---	2	1	---	---	---	---	7	2	6414		R/W
01A3	300420	10 W	Reserved												
01AD	300430	8 W	BLE Device Name	---	---	---	---	---	---	---	---	---	6410		R
01B5	300438	331 W	Reserved												
0300	300769	2 W	IPR96D1 Date & Time	---	---	---	---	---	---	---	---	---	6408		R
0302	300771	1 W	Reserved												
0303	300772	1 W	Output Relays Status	---	---	---	---	---	---	---	---	---	1211		R
0304	300773	1 W	Digital Input Status	---	---	---	---	---	---	---	---	---	6020		R
0305	300774	2 W	Pickup Flag	---	---	---	---	---	---	---	---	---	6022		R
0307	300776	2 W	Status Flag	---	---	---	---	---	---	---	---	---	6023		R
0309	300778	1 W	Led Status	---	---	---	---	---	---	---	---	---	6040		R
030A	300779	1 W	Button Status	---	---	---	---	---	---	---	---	---	6619		R
030B	300780	30 W	Reserved												
0329	300810	2 W	Ground RMS Current	A	0,00	0,01	10	0,1	100	1	1000	---	6		R
032B	300812	30 W	Reserved												
0349	300842	1 W	Last Trip Cause	---	---	---	---	---	---	---	---	---	1215		R
034A	300843	2 W	Last Trip Date & Time	---	---	---	---	---	---	---	---	---	6408		R
034C	300845	1 W	Last Trip Decimal Second	---	---	---	---	---	---	---	---	---	2		R
034D	300846	5 W	Reserved												
0352	300851	2 W	Last Trip Ground RMS Current	A	0,00	0,01	10	0,1	100	1	1000	---	6		R
0354	300853	10 W	Reserved												
035E	300863	1 W	Trip Counter	---	---	---	---	---	---	---	---	---	2		R
035F	300864	1 W	Ground OC Counter	---	---	---	---	---	---	---	---	---	2		R
0360	300865	1 W	Opening Counter	---	---	---	---	---	---	---	---	---	2		R
0361	300866	671 W	Reserved												
0600	301537	1 W	Last Event Number	---	---	---	---	---	---	---	---	---	2		R
0601	301538	2 W	Last Event Date and Time	---	---	---	---	---	---	---	---	---	6408		R
0603	301540	1 W	Selected Event Number	---	---	---	---	---	---	---	---	---	2		R/W
0604	301541	1 W	Selected Event Type	---	---	---	---	---	---	---	---	---	1215		R
0605	301542	2 W	Selected Event Date and Time	---	---	---	---	---	---	---	---	---	6408		R
0607	301544	1 W	Selected Event Decimal Second	---	---	---	---	---	---	---	---	---	2		R
0608	301545	2 W	Selected Event Ground RMS Current	A	0,00	0,01	10	0,1	100	1	1000	---	6		R

**IPR96D1 DATA FORMATS**

Format Code	Type	Value	Definition
<b>F1</b>	<b>Integer</b>		<b>Signed Integer Value</b> Example: -123 saved as -123
<b>F2</b>	<b>Integer</b>		<b>Unsigned Integer Value</b> Example: 123 saved as 123
<b>F4</b>	<b>Integer</b>		<b>Unsigned Integer Value with 1 decimals</b> Example: 1.0 saved as 10
<b>F5</b>	<b>Integer</b>		<b>Signed Integer Value with 2 decimals</b> Example: -1.00 saved as -100
<b>F6</b>	<b>Integer</b>		<b>Unsigned Integer Value with 2 decimals</b> Example: 1.00 saved as 100
<b>F10</b>	<b>Integer</b>		<b>Unsigned Integer Access Code Value Register Format</b> Example: 1111 saved as 1111 (only digits 1~9 accepted, digit 0 is NOT ALLOWED)
<b>F902</b>	<b>Integer</b>		<b>Relay Mode</b>
		0	LATCHED
		1	PULSED
<b>F1211</b>	<b>16 Bits BitMap</b>		<b>Output Relays Status Register</b>
		Bit 0	Trip Output Relay { 0 = "De-energized" , 1 = "Energized" }
		Bit 1	Aux1 Output Relay { 0 = "De-energized" , 1 = "Energized" }
		Bit 2	Aux2 Output Relay { 0 = "De-energized" , 1 = "Energized" }
		Bit 3 ~ Bit 15	Not Used
<b>F1216</b>	<b>Integer</b>		<b>Output Relays</b>
		0	---
		1	T--
		2	-1-
		3	T1-
		4	--2
		5	T-2
		6	-12
		7	T12
<b>F1230</b>	<b>Integer</b>		<b>Digital Input Function</b>
		0	NONE
		1	BREAKER STATUS
		2	EXTERNAL RESET
		3	ACTIVATE AUX1
		4	ACTIVATE AUX2
<b>F6016</b>	<b>Integer</b>		<b>Digital Protection Curve Definition Format Configuration Register Format</b>
		0	DefiniteTime
		1	ANSI Moderate Inverse
		2	ANSI Normal Inverse
		3	ANSI Very Inverse
		4	ANSI Extreme Inverse
		5	IAC Moderate Inverse
		6	IAC Normal Inverse
		7	IAC Very Inverse
		8	IAC Extreme Inverse
		9	IEC Short Time
		10	IEC A Normal Inverse
		11	IEC B Very Inverse
		12	IEC C Extreme Inverse
<b>F6020</b>	<b>16 Bits BitMap</b>		<b>IPR96D1 Digital Input Status</b>
		Bit 0	Digital Input 1 { 0 = "Deactivated" , 1 = "Activated" }
		Bit 1	Digital Input 2 { 0 = "Deactivated" , 1 = "Activated" }
		Bit 2 ~ Bit 15	Not Used
<b>F6022</b>	<b>32 Bits BitMap</b>		<b>IPR96D1 Pickup Flag Format</b>
		Bit 0	Gnd Instant Overcurrent
		Bit 1	Gnd Timed1 Overcurrent
		Bit 2	Gnd Timed2 Overcurrent
		Bit 3	Breaker Failure
		Bit 4	Mechanical Operation
		Bit 5 ~ Bit 31	Not Used
<b>F6023</b>	<b>32 Bits BitMap</b>		<b>IPR96D1 Status Flag Format</b>
		Bit 0	Gnd Instant Overcurrent
		Bit 1	Gnd Timed1 Overcurrent
		Bit 2	Gnd Timed2 Overcurrent
		Bit 3	Breaker Failure
		Bit 4	Mechanical Operation
		Bit 5 ~ Bit 12	Not Used
		Bit 13	Setpoint Discrepancy
		Bit 14	Flash Busy
		Bit 15	ADC Failure

		Bit 16	BLE Failure
		Bit 17	RAM Failure
		Bit 18	Check Events
		Bit 19	Max Switching Current
		Bit 20	Out of Service
		Bit 21 ~ Bit 31	Not Used
<b>F6040</b>	<b>16 Bits BitMap</b>		<b>IPR96D1 Led Status</b>
		Bit 0	Status Led { 0 = "Off" , 1 = "On" }
		Bit 1	Trip Led { 0 = "Off" , 1 = "On" }
		Bit 2 ~ Bit 15	Not Used
<b>F6401</b>	<b>Integer</b>		<b>System Frequency</b>
		0	50 Hz
		1	60 Hz
<b>F6407</b>	<b>Integer</b>		<b>Events Enable/Disable</b>
		0	Disable
		1	Enable
<b>F6408</b>	<b>Integer</b>		<b>Unix Timestamp</b>
			This count starts at the Unix Epoch on January 1st, 1970 at UTC
<b>F6409</b>	<b>String</b>		<b>BaudRate Value</b>
		3	9600 Bps
		4	19200 Bps
		5	38400 Bps
		6	57600 Bps
		7	115200 Bps
<b>F6410</b>	<b>String</b>		<b>String</b>
		BLE Name	Allowed characters: &()-./0123456789:ABCDEFGHIJKLMNPOQRSTUVWXYZ[ ]_abcdefghijklmnopqrstuvwxyz
<b>F6414</b>	<b>Integer</b>		<b>RS Port Configuration</b>
		2	8N1 (8 bits Data, Parity NONE, 1 bit Stop)
		3	8N2 (8 bits Data, Parity NONE, 2 bit Stop)
		4	8E1 (8 bits Data, Parity EVEN, 1 bit Stop)
		5	8E2 (8 bits Data, Parity EVEN, 2 bit Stop)
		6	8O1 (8 bits Data, Parity ODD, 1 bit Stop)
		7	8O2 (8 bits Data, Parity ODD, 1 bit Stop)
<b>F6619</b>	<b>16 Bits BitMap</b>		<b>Button Status</b>
		Bit 0	Down { 0 = "Not Pressed" , 1 = "Pressed" }
		Bit 1	Up { 0 = "Not Pressed" , 1 = "Pressed" }
		Bit 2	Function { 0 = "Not Pressed" , 1 = "Pressed" }
		Bit 3	Enter { 0 = "Not Pressed" , 1 = "Pressed" }
		Bit 4	Esc { 0 = "Not Pressed" , 1 = "Pressed" }
		Bit 5 ~ Bit 15	Not Used
<b>F7012</b>	<b>Integer</b>		<b>IPR96D1 Out of Service Relay</b>
		0	NONE
		1	AUX2
<b>F7041</b>	<b>Integer</b>		<b>Modbus Command</b>
		0	LOCAL
		1	REMOTE 485
		2	REMOTE BLE
		3	REMOTE 485 + BLE

**IPR96D1 COMMANDS  
(F1200)**

<b>Command</b>	<b>Label</b>	<b>Password</b>	<b>Preset data</b>
0	No command	no	
1	Remote Reset	Adv	
4	Set BLE Name	Adv	x
5	Set Date and Time	user	x
9	Clear Events	user	
10	Operate Aux1	Adv	
11	Operate Aux2	Adv	
13	Set Access Code	user	x
29	Clear Maintenance Data	Adv	

IPR96D1 EVENTS (F1215)		
Category	Event	Code
NO_CATEGORY	Events Clear	1
GND_CURRENT_PROT	Gnd Inst Overcurrent	2
GND_CURRENT_PROT	Gnd Timed1 Overcurrent	3
GND_CURRENT_PROT	Gnd Timed2 Overcurrent	4
SYSTEM	Breaker Failure	5
SYSTEM	Mechanical Operation	6
DIGITAL_INPUT	Digital Input 1 Deactive	7
DIGITAL_INPUT	Digital Input 1 Active	8
DIGITAL_INPUT	Digital Input 2 Deactive	9
DIGITAL_INPUT	Digital Input 2 Active	10
DIGITAL_INPUT	---	11
DIGITAL_INPUT	---	12
DIGITAL_INPUT	Breaker Status Opened	13
DIGITAL_INPUT	Breaker Status Closed	14
DIGITAL_INPUT	Remote Reset	15
DIGITAL_INPUT	Remote Trip Set	16
OUTPUT_RELAY	Trip De-Energized	17
OUTPUT_RELAY	Aux1 De-Energized	18
OUTPUT_RELAY	Aux2 De-Energized	19
OUTPUT_RELAY	Trip Energized	20
OUTPUT_RELAY	Aux1 Energized	21
OUTPUT_RELAY	Aux2 Energized	22
OUTPUT_RELAY	Trip Remote De-Energized	23
OUTPUT_RELAY	Aux1 Remote De-Energized	24
OUTPUT_RELAY	Aux2 Remote De-Energized	25
OUTPUT_RELAY	Trip Remote Energized	26
OUTPUT_RELAY	Aux1 Remote Energized	27
OUTPUT_RELAY	Aux2 Remote Energized	28
SYSTEM	Default Setpoint	29
SYSTEM	Setpoint Stored	30
SYSTEM	Setpoint Discrepancy	31
SYSTEM	Password Changed	32
SYSTEM	Model Changed	33
SYSTEM	Test BLE	34
SYSTEM	Trip Data Lost	35
SYSTEM	Trip Data Restored	36
SYSTEM	Calibration Time Data Lost	37
SYSTEM	Calibration Data Lost	38
SYSTEM	Power Loss	39
SYSTEM	Aux Power Restored	40
SYSTEM	Maintenance Data Cleared	41
SYSTEM	Maintenance Data Lost	42
SYSTEM	Maintenance Data Restored	43
SYSTEM	Status Lost	44
SYSTEM	BLE Failure	45
SYSTEM	ADC Failure	46
SYSTEM	Flash Busy	47
SYSTEM	Out of Service	48
SYSTEM	Max Switch Current	49